

**Real Estate Investments | Real Estate 209 and Finance 209**  
The Wharton School | University of Pennsylvania | **Spring 2015**

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**Professor Sam Chandan**

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Office: 1481 Steinberg Hall-Dietrich Hall

Office Hours: By Appointment &

Tuesdays 15:15 to 16:20 beginning February 3

Please check Canvas for current schedule

**Teaching Assistants**

Syed (Mobi) Ahmed

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**Course Objectives**

Real estate is a multi-faceted field, encompassing both an operating industry and a broad category of equity and debt investments. It has its own institutional features and investment structures. As the foundation course for undergraduate students with a concentration in real estate, this class offers an overview of the industry rather than a narrow focus on a particular topic. Beyond that overview, **the overriding learning objective of this course is to ensure fluency in the technical skills required for real estate financial analysis.** These skills are essential to upper-level real estate courses and for the analyst role in any facet of the real estate industry.

**Prerequisites**

Finance 100 is a strict prerequisite for enrollment. By extension, the Wharton undergraduate economics sequence and Mathematics 104 are also prerequisites. In rare instances, the requirement may be waived for College, Engineering, or Nursing students with equivalent coursework in finance. The curriculum assumes no prior experience or academic background in real estate.

**Course Materials**

Required materials:

- » (L)inneman, Peter, **Real Estate Finance and Investments, 3<sup>rd</sup> Edition**. Note that because of significant updates, the Second Edition is not an effective substitute for the more recent text.
- » Readings, PowerPoint slides, discussion questions, problem sets, and old exams will be available through (C)anvas and (S)tudy.net as indicated.

For interested students, optional further readings that are **not required for this course**:

- » Brueggeman and Fisher, Real Estate Finance and Investments, 14<sup>th</sup> Edition
- » Geltner and Miller, Commercial Real Estate Analysis and Investments, 3<sup>rd</sup> Edition

## Case Studies

Three cases will be distributed in class according to the syllabus schedule. **You may choose your group of four to six members and must work with the same team on all cases.** Groups may include members from both sections. No changes to group membership will be permitted after the first case is submitted.

The cases require a variety of skills, from financial acumen to critical problem solving. You should seek a mix of talents and backgrounds on your team. All team members should work on all cases. A “divide and conquer” approach where two or three teammates work on each case will seriously impinge on your individual preparedness for the examinations.

You may discuss the cases with other groups. However, each group is responsible for preparing case submissions independently. Since cases will be discussed on the dates they are due, late cases will not be accepted nor will extensions be granted. You may submit the cases ahead of schedule if you anticipate a conflict on the due date.

## Examinations

Two 70-minute midterm exams will be administered during regularly scheduled class time. If you cannot attend class on one of the exam dates, please do not enroll in the class. Make-up exams will not be administered except at the request of the Undergraduate Vice Dean’s office. **Notes from Student Health should be taken to the Vice Dean’s office for endorsement by your advisor.**

The second examination assumes proficiency in the skills taught in the first part of the class. Exams will cover material discussed in class and during guest lectures, from class notes, the aforementioned cases, practice problems, and assigned readings.

The exams are closed book, but **you are allowed one single-sided letter-size page of notes (hand-written or printed)** into each exam.

You will need a financial calculator for the exams. **You will not be allowed to use a computer, iPad or other tablet device, or iPhone or other smartphone in lieu of a calculator.** Business and financial calculator emulator apps may not be substituted for a financial calculator. If you do not have your own financial calculator, it is your responsibility to make arrangements for access to a calculator for the exams.

## Class Format, Participation, and Expectations

- » Be present for all classes, unless you have made prior arrangements to be absent. **Please use your name tents**, at least for the first few weeks of class. Students missing a session are responsible for obtaining notes and other materials from their classmates.
- » **Arrive at class on time and prepared to participate in the discussion.** This means having completed the required readings in advance of the lecture and being ready to comment on or discuss the class material.
- » In most cases, there are discussion questions associated with each set of readings. Be prepared to discuss these questions in class.
- » Your full attention is expected during class; you are expected to set aside non-class material, including messaging and social media obligations. Smart phones are not permitted during class.

- » Be present for speakers scheduled outside of normal class time, unless you have a conflict with another class or have spoken with me in advance about an unresolvable non-academic conflict.
- » Please refer to the Wharton Undergraduate Program's Policy on Secular & Religious Holidays for information specifically relating to absences on account of religious observance.

### **Academic Integrity**

The University's Code of Academic Integrity applies to all aspects of the course. Without exception, **violations of the Code will result in a failing grade and referral to the Office of Student Conduct.**

### **Grading**

Midterm Examination 1	20%
Midterm Examination 2	20%
Case 1	20%
Case 2	20%
Case 3	20%

Subsuming a specific distribution, the mean grade point average for the class is 3.3 (B+). Roughly one-third of students can expect to receive a grade in the A-range. Two-thirds of students can expect to receive grades in the B-range or lower.

**Grading standards for this course are high but fair.** Students must pass both exams and all three cases in order to receive a passing grade for the course. While there is no formal class participation grade, frequent or unexplained absences from class may result in a downward revision to your grade. Please refer to the Wharton Undergraduate Program's Policies: Class Expectations.

### **Re-Grade Requests**

In the event you believe there has been an error in the determination of your score on a case or exam:

- » You have two weeks from the date a graded exam or case is returned to submit a re-grade request.
- » Re-grade requests and requests for elaboration on point deductions will not be accepted over email. Please prepare a typed note explaining clearly the error you believe has been made, attach your exam or case to the note, and submit the request to my mailbox in the Real Estate Department office (Suite 1400 Steinberg Hall-Dietrich Hall)
- » Exams or cases submitted for re-grading will be re-graded in their entirety.

## Schedule

Readings shown on the syllabus are in addition to the slide deck for each class, exercises and problem sets, and any supplementary material posted to Canvas. Readings are available in (L)inneman (C)anvas or (S)tudy.net as indicated. Chapters from Linneman are indicated as (L:Chapter).

Week	Date	Topics	Readings & Assignments
1	Th Jan 15	The Commercial Real Estate Asset Class	(L:2) "What Is Real Estate?" pp. 12-35 (C) Emerging Trends in Real Estate 2015 Ch 1
2	Tu Jan 20	Space Markets and Asset Markets Commercial Real Estate Leases	(S) Markets for Real Estate Assets and Space (L:3) Fundamentals of Commercial Leases
	Th Jan 22	Pro Forma Analysis	(L:4) Property Level Pro Forma Analysis (L:5) Financial Modeling (S) Nine Common Abuses in Pro Forma Cash Flow Projections
3	Tu Jan 27	Pro Forma Analysis (continued)	<b>Case I Posted</b> (L:PI) Basics of Discounted Cash Flow and Net Present Value Analysis (L:P2) IRR: What It Is and What It Isn't
	Th Jan 29	Tax Calculations	(L:4) Property Level Pro Forma Analysis, Pages 55-56, 59-63
4	Tu Feb 3	Property Valuation	(L:7) The Use and Selection of Cap Rates, Including Supplements A and C (S) How Reliable Are Commercial Appraisals? Another Look (S) Capital Markets Impact on Commercial Real Estate Cap Rates
	Th Feb 5	Mortgage Basics	(L:PIII) Amortization Fundamentals (L:12) Should You Borrow
5	Tu Feb 10	Capital Stack	(L:13) The Use of Debt and Mortgages (S) Primer on Mezzanine Finance
	Th Feb 12	Capital Stack (continued)	(L:15) Ground Leases as a Source of Finance
6	Tu Feb 17	Development	<b>Case I Part I Due by 10:00 AM</b> (L:8) Development Pro Forma Analysis (L:9) Development Feasibility Analysis
	Th Feb 19	Real Estate Cycles	(L:20) Real Estate Cycles (S) Adjustment Mechanisms in Real Estate Markets (C) Counting Cranes: Supply Discipline & Apartment Market Performance (C) Awaiting Cranes: Supply Discipline & Office Market Performance
7	Tu Feb 24	Discussion of Case I  <b>Guest Speaker</b> — 18:00 to 19:30 — PJ Yeatman, Head of Private Real Estate, CenterSquare	<b>Case I Part II Due by 10:00 AM</b>
	Th Feb 26	NO CLASS (Offset to Guest Speaker)	<b>Case II Posted</b>

8	Tu Mar 3	Cover Outstanding Material Midterm Exam Review	
	Th Mar 5	<b>MIDTERM I</b>	
9	Tu Mar 10	NO CLASS (Spring Break)	
	Th Mar 12	NO CLASS (Spring Break)	
10	Tu Mar 17	Debt Market Structures and Commercial Mortgage-Backed Securities (CMBS)	(L:14) CMBS Basics (L:SIII) A Look at a Real CMBS Issue (S) How to Build a Bond
	Th Mar 19	Debt Market Structures and Commercial Mortgage-Backed Securities (CMBS)	(S) The Past, Present, and Future of CMBS (S) How Lehman Got Its Real Estate Fix (S) Defaults in Securitized Real Estate Loans
11	Tu Mar 24	Discussion of Case II  <b>Guest Speaker</b> — 18:00 to 19:30 — Yon Cho, Partner, Pacific Coast Capital	<b>Case II Due by 10:00 AM</b>
	Th Mar 26	NO CLASS (Offset to Guest Speaker)	<b>Case III Posted</b>
12	Tu Mar 31	Equity Market Structures and Real Estate Investment Trusts (REITs)	(S) Guide to Real Estate Capital Markets: Participating Debt and Equity (Skim) (L:17) Real Estate Private Equity Funds (C) Public and Private Real Estate
	Th Apr 2	Equity Market Structures and Real Estate Investment Trusts (REITs)	(L:18) REITs and Liquid Real Estate (S) REITs for Rookies (S) Basic Valuation of a Real Estate Investment Trust (S) UPREITs: A Vehicle for Tax Deferral and Asset Growth
13	Tu Apr 7	Real Estate Exit Strategies	(L:16) Real Estate Exit Strategies (L:S1) Return Characteristics of Commercial Real Estate (C) Benchmarking Real Estate Performance
	Th Apr 9	Housing Markets	(C) Post-Recession Drivers of Preferences for Homeownership (L:19) Supplement A (S) Safety in Renting
14	Tu Apr 14	Commercial Rent or Own Decisions  <b>Guest Speaker</b> — 18:00 to 19:30 — Ella Neyland, President, Steadfast Income REIT and Steadfast Apartment REIT	(L:19) Corporate Real Estate Decision Making, Including Supplement B (S) Downsizing and Workplace Trends in the Office Market
	Th Apr 16	NO CLASS (Offset to Guest Speaker)	<b>Case III Due by 10:00 AM</b>
15	Tu Apr 21	Cover Outstanding Material Midterm Exam Review	
	Th Apr 23	<b>MIDTERM II</b>	
16	Tu Apr 28	Discussion of Case III Semester in Review	